Yukon Influenza Surveillance Report

Influenza Season: 2009-2010

Summary Report

FluWatch Weeks 25-28 (June 20 – July 17, 2010)

***All data are provisional and subject to change as information is received.

Reported by: Yukon Communicable Disease Control Report

Date: August 9, 2010

FluWatch Weeks 25-28
Newsletter 16

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Report Highlights

This surveillance report, produced by YCDC, summarizes influenza activity in the Yukon for the 2009-2010 season, during weeks 25-28 (June 20 – July 17th, 2010). Please note that FluWatch reports are produced one week behind the current date. 2009-2010 FluWatch Weeks Calendar: http://www.phac-aspc.gc.ca/fluwatch/09-10/09-10cal-eng.php

During weeks 25-28, surveillance indicators continue to demonstrate low to no levels of influenza activity. In week 27 one seasonal influenza A (H3) result was detected in a Yukon resident who had a travel history within North America.

Pandemic H1N1 (pH1N1) Severe Outcomes

Hospitalizations

There have been no hospitalizations since week 46 (Nov 15 - Nov 21, 2009).
Since October 20th, there have been 15 pH1N1 Yukon residents admitted to hospital. Among hospitalized cases 12 of the 15 had at least one risk factor for influenza complications. 3 out of 15 hospitalized cases have been admitted to ICU.

Deaths

There have been no deaths reported since week 46 (Nov 15 - Nov 21).
Yukon has had three deaths where pH1N1 was detected; pH1N1 played a direct role in the death in two of the three individuals. The first death occurred during week 44, in a female child with underlying health conditions. The second death occurred during week 46 in an adult female, underlying health conditions were not present. A third death was announced December 9th, 2009. The death occurred in an infant who died early November; however, pH1N1 infection is thought to be coincidental and not a contributing factor in the death. A complete coroner's investigation is pending.
Link to Yukon Health and Social Services Release: http://www.hss.gov.yk.ca/news/id_213/

FluWatch Reporting

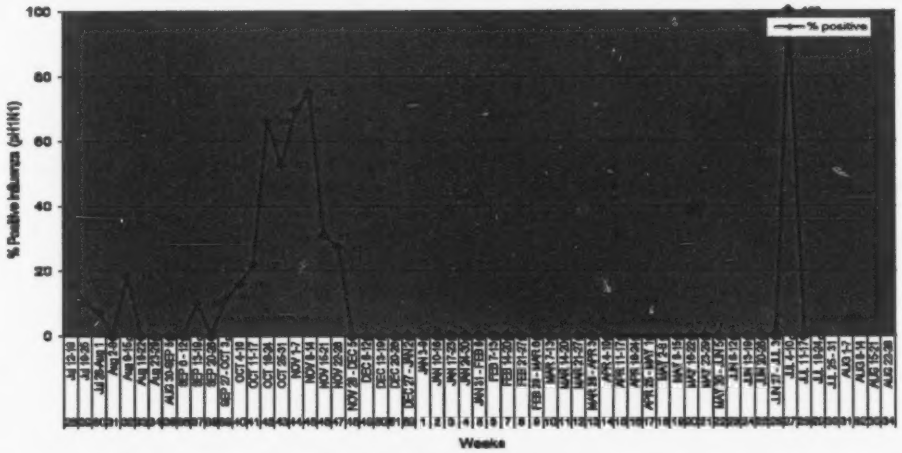
Based on FluWatch activity level definitions, Yukon has reported the following activity levels:
FluWatch activity level definition: http://www.phac-aspc.gc.ca/fluwatch/09-10/def09-10-eng.php

Weeks 25-26	No activity: no laboratory-confirmed influenza detections during the past four weeks, however, sporadically occurring ILI may be reported
Weeks 27-28	sporadically occurring **ILI and lab confirmed influenza* with NO outbreaks** detected within the influenza surveillance region * confirmation of influenza within the surveillance region at any time within the prior four weeks

Laboratory Reports

From week 47 to 26, none of the submitted respiratory specimens have tested positive for influenza. During week 27, one respiratory specimen was submitted and was found to be positive for seasonal influenza A H3).

Percentage of Respiratory Specimens (Submitted for testing in Yukon) Diagnosed Positive for Influenza pH1N1 during weeks 25-28



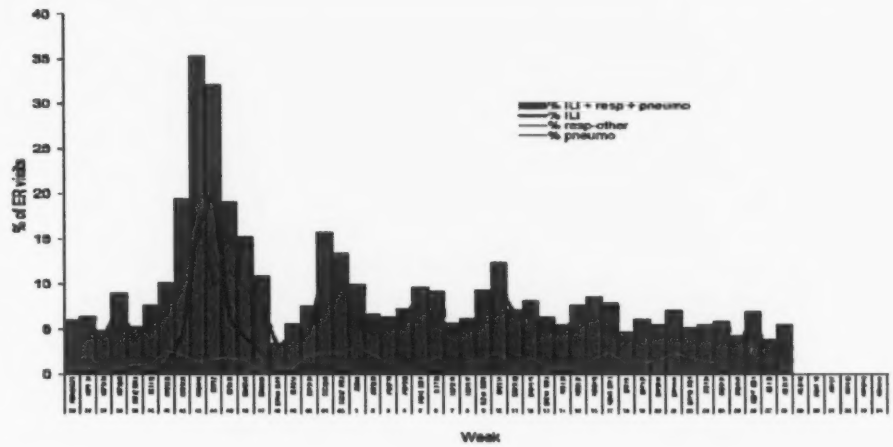
Communities with Laboratory Confirmed pH1N1

Cumulative laboratory information indicates that since April, 2009 Whitehorse and 9 out of 13 surrounding communities have had confirmed pH1N1 case reports.

Whitehorse General Hospital Emergency Visits

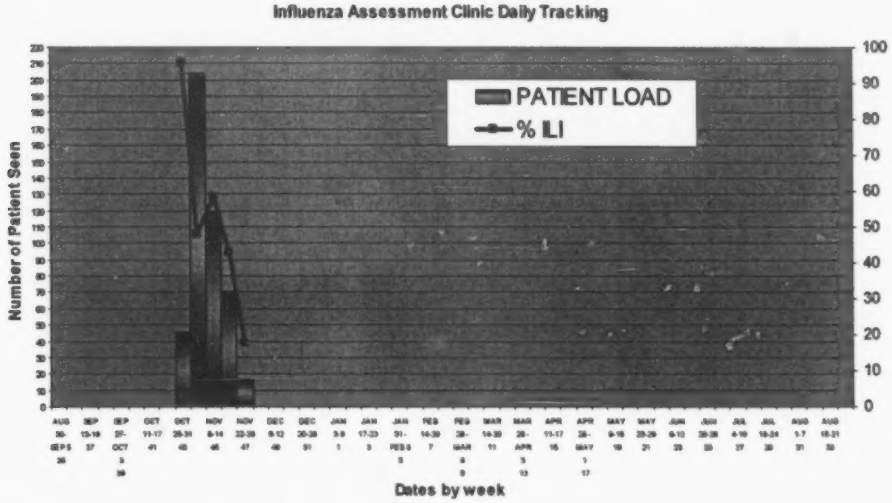
During weeks 25-28 the proportion of presentations to the WGH emergency department for respiratory symptoms identified as ILI has remained low.

Percent of WGH ER visits with influenza-like illness (ILI), other respiratory symptoms, or pneumonia by week



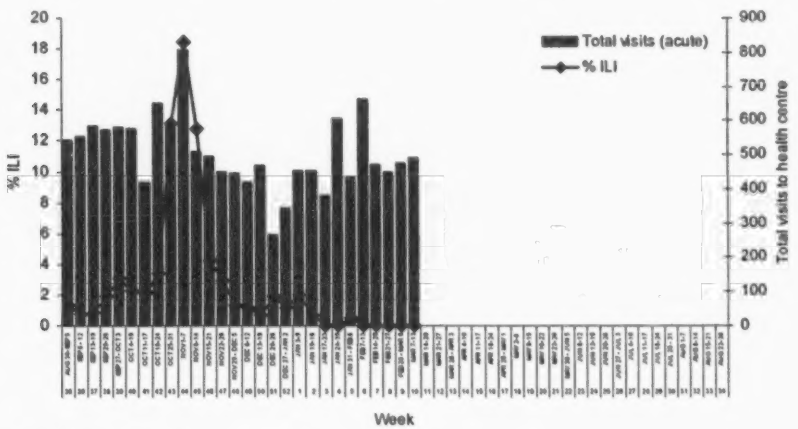
Influenza Assessment Clinic

This downtown Whitehorse clinic opened its doors on October 30th, 2009. The following graph depicts patient volume from October 30th to November 27, 2009. The clinic's last day of operation was November 27th, 2009.



Community Health Centres

Influenza-related visits to Community Health Centres (rural Yukon) increased substantially during weeks 42-44 while decreasing activity was seen from week 45 on. From week 48 on, the proportion of ILI related visits have returned to similar levels experienced in week 42 and earlier. (YCDC Data entry ongoing)

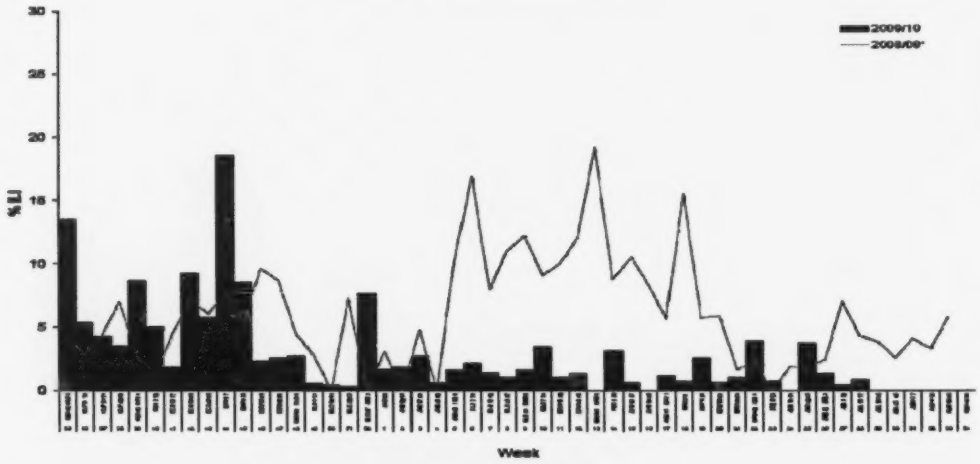


*Data provided from Community Nursing

Sentinel physicians/sites

The percentage of patients presenting to sentinel physicians or sites with ILI during weeks 25-28 was between 0.4% to 3.7%. During the 2008/09 season, an average of five sentinel reports were received each week. A new recruitment of sentinel physicians and sites occurred in July 2009. There are presently 18 sentinel physicians/sites across the territory; during weeks 25-28 an average of 8 (44%) sentinels reported. Yukon's sentinel surveillance system is comprised of all Community Health Centre's and participating physicians. (FluWatch Sentinel Surveillance Information http://www.phac-aspc.gc.ca/fluwatch/sent-eng.php)

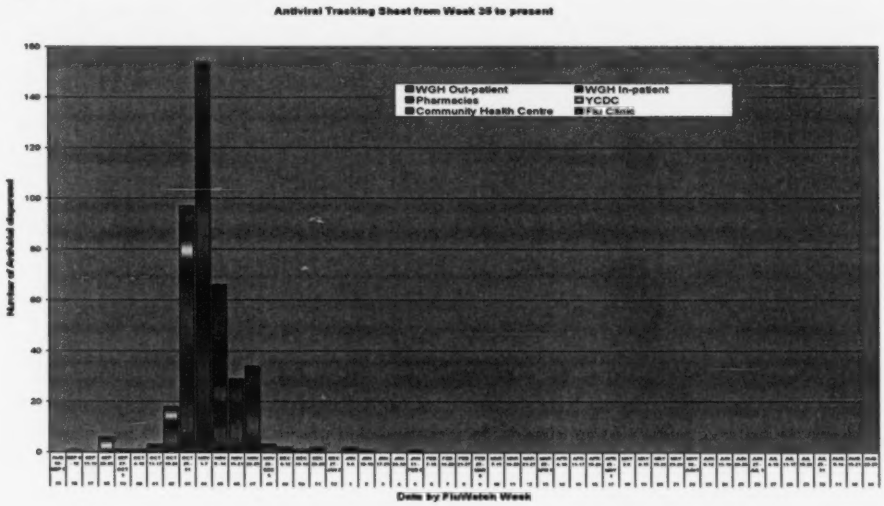
Percentage with ILI, visits to sentinels by week



*2008/09 weeks are slightly different than those shown (following the Sun-Sat weekly pattern).

Antiviral Prescriptions/Dispensing

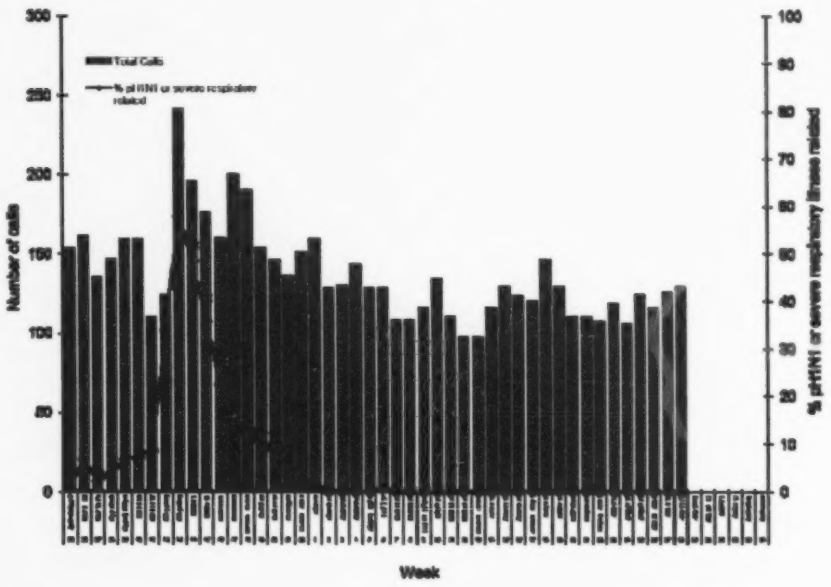
Antiviral prescriptions have decreased since week 45. Antiviral have not been distributed since week 5 (Jan 31 - Feb 6, 2010)



HealthLink 811

The graph below shows the percentage of calls related to Influenza A pH1N1 or severe respiratory illness.

Number of calls and percentage related to pH1N1 or severe respiratory illness by week



Outbreaks

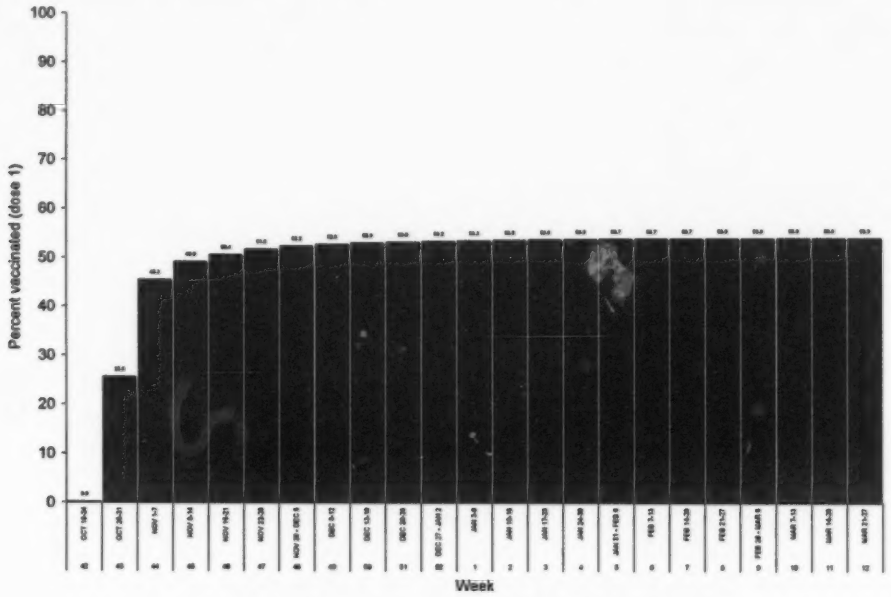
No facility outbreaks have been reported since week 43 (Oct 25 - 31, 2009). On October 29th, 2009 (during week 43) YCDC was notified of an influenza outbreak within the Whitehorse Correctional facility. The outbreak was contained to fewer than 10 residents who developed symptoms during their stay at the facility or who exhibited symptoms of influenza upon admission. Causative organism of the outbreak was identified as pH1N1. This outbreak was declared over on November 16th, 2009

Schools

There have been no reports of high absenteeism in schools since week 45 (Nov 8 - 14, 2009).

Immunization

The percentage of the population vaccinated with one dose against influenza A pH1N1 reached 53.8% in week 8. The age groups with the highest proportions vaccinated (dose 1) are those 6 months to 4 years and those 65 year or older. Vaccine administration is on going, however, due to low volume of continued vaccine uptake, this section will no longer be updated on a monthly basis.



Proportion of population vaccinated, dose 1, by week in the Yukon Territory

Age group	% Vaccinated
6 mo - 4 years	70.3
5-18 years	56.3
19-29 years	36.5
30-39 years	51.8
40-64 years	55.6
65+ years	68.9
TOTAL	53.8

*Data provided by the Community Nursing Vaccination Program.

Adverse Events Following Immunization

Of 18 400, doses administered from October 26 to March 27, 2010, 33 adverse events following immunization have been reported. The types of reports include both local and allergic reactions. None of the events fit the criteria for serious adverse events, and none required hospitalization.

Obtained from: FluWatch – Public Health Agency of Canada
July 4 – July 17, 2010 (Weeks 27 & 28)
http://www.phac-aspc.gc.ca/fluwatch/index-eng.php

Summary of FluWatch Findings for the Week ending July 17, 2010

Overall influenza activity in Canada has remained low since the beginning of 2010, although 6 and 7 regions have reported sporadic activity during week 27 and 28, respectively. Six specimens (out of 2,005 or 0.3%) tested positive for influenza in weeks 27-28; one pandemic H1N1 2009, one influenza A/H3N2, two unsubtyped influenza A and two influenza B. Those specimens were reported from BC, AB and QC.

Overall pandemic influenza activity remained low worldwide as of July 12, 2010. Low levels of influenza were reported from the southern Hemisphere except for South Africa (influenza activity due to seasonal influenza B and H3N2) although half of the winter season has already passed. The most active areas of pandemic influenza virus transmission currently were in parts of South Asia, West Africa, and Central America. Seasonal influenza H3N2 viruses continue to circulate at varying levels across parts of the Americas, Africa, and Southeast Asia.

Canadian situation

Paediatric Influenza Hospitalizations and Deaths

In weeks 27-28, no laboratory-confirmed influenza-associated paediatric (18 years of age and under) hospitalizations were reported through the Immunization Monitoring Program Active (IMPACT) network. Since the beginning of the 2009-2010 influenza season (30 August, 2009), 952 hospitalizations have been reported, of which 97.7% were due to pandemic H1N1 2009. The last hospitalized case was reported during week 15. Please note that delays in the reporting of data may cause data to change retrospectively.

Adult Influenza Hospitalizations and Deaths

During weeks 27 and 28, no new laboratory-confirmed influenza-associated adult (16 years of age and older) hospitalizations were reported through the Canadian Nosocomial Infection Surveillance Program (CNISP) from 8 reporting sites. From November 22, 2009 to May 22, 2010, 57 laboratory-confirmed influenza cases among hospitalized adults were reported through CNISP sentinel sites. The last hospitalized case was reported during week 1. Please note the total number of CNISP reporting sites fluctuates weekly and most of the reporting sites started surveillance in late fall 2009.

Sale of antivirals (AV)

During weeks 27 and 28, little change in antiviral prescription sales were observed among provinces and territories. Daily and weekly antiviral data at the Health Region level demonstrated low antiviral prescription rates among all Health Regions for the report weeks. All the antivirals sold the past two weeks were Tamiflu. During the two-week period, general "respiratory over the counter products" trends demonstrate a decline or leveling-off among all provinces and territories. However, in week 27, Yukon showed an increase over the past week of general "respiratory over the counter products" sales.

Antigenic Characterization

Since September 1, 2009, the National Microbiology Laboratory (NML) has antigenically characterized 858 (98.1%) influenza A/H1N1, 10 (1.1%) influenza A/H3N2 and 7 (0.8%) influenza B viruses that were received from provincial laboratories. Of the 858 influenza A/H1N1 viruses characterized, 855 (99.7%) were antigenically related to A/California/7/2009, which is the pandemic reference virus selected by WHO for the pandemic H1N1 2009 vaccine and three (0.3%) were A/Brisbane/59/2007-like. Of the 10 influenza A/H3N2 viruses characterized, two were related to A/Brisbane/10/07 (2009-10 vaccine) and eight viruses were antigenically related to A/Perth/16/09 (2010-2011 Northern Hemisphere vaccine). Of the 7 influenza B viruses characterized, 5 were antigenically related to B/Brisbane/60/08 (2009-10 vaccine), one was antigenically similar to B/Malaysia/2506/2004 and one was related to the previous vaccine virus B/Florida/4/2006.

Antiviral Resistance

Since August 30, 2009, 12 cases of oseltamivir resistant pandemic H1N1 2009 were reported to date in Canada while one was reported in the 2008-2009 influenza season. All resistant cases were associated with oseltamivir treatment or prophylaxis.

International influenza updates

Global information

WHO: Given the diverse pattern of influenza activity in the tropics and that the influenza season in the Southern Hemisphere is still ongoing, WHO declared on July 21, 2010 that it is too early to determine if these countries have transitioned to levels and patterns expected for seasonal influenza. <http://www.who.int/csr/disease/swineflu/notes/briefing_20100721/en/index.html>

As of July 12, 2010, over 214 countries and overseas territories or communities worldwide reported cases of pandemic H1N1 2009 (at least 18,337 deaths). Worldwide, overall pandemic and seasonal influenza activity remained low. The most active areas of pandemic influenza virus transmission currently were in parts of South Asia, West Africa, and Central America. In the temperate zone of the southern hemisphere, pandemic and seasonal influenza activity has remained low during the first half of the southern hemisphere winter, except in South Africa, where increased detections of primarily seasonal influenza viruses (type B and H3N2) were reported during late June and early July 2010. Seasonal influenza H3N2 viruses continue to circulate at varying levels across parts of the Americas, Africa, and Southeast Asia. Increased seasonal influenza activity continues to be observed in several countries of Central America.
<http://www.who.int/csr/don/2010_07_16/en/index.html>

Antiviral resistance: As of July 14, 2010, 298 pandemic H1N1 2009 isolates worldwide have been found to be resistant to oseltamivir. All but one of these had the H275Y substitution and were assumed to remain sensitive to zanamivir. <http://www.who.int/csr/disease/swineflu/oseltamivirresistant20100716.pdf>

Geographic update

Southern hemisphere

South Africa began observing a sharp increase in the proportion of sentinel respiratory samples testing positive for influenza virus (primarily seasonal influenza B and H3N2) during late June 2010, reaching a peak of ~50% detection rate during the first week of July 2010, and falling to ~40% during the second week of July 2010. In Chile (as of late June 2010) and Argentina (as of early July 2010), the most recent available data showed that influenza activity remained sporadic in Argentina and low in Chile. In both Chile and Argentina, RSV has been the predominant circulating respiratory virus since mid-April 2010. In Australia, although a small cluster of pandemic influenza cases, including a few hospitalized cases, were recently detected in the Northern Territory of Australia, pandemic and seasonal influenza virus detections remained otherwise sporadic, albeit slightly increased during late June and early July 2010. Similarly, in New Zealand, rates of ILI have remained low and below the seasonal baseline, with only sporadic detections of pandemic and seasonal H3N2 viruses through the first week of July 2010. In both Australia and New Zealand, current levels of ILI are similar to those observed during the same period in 2008, when the influenza season was noted to have arrived and peaked late in winter. <http://www.who.int/csr/don/2010_07_16/en/index.html>

Northern hemisphere

Central America & the Caribbean: In the tropical regions of the Americas, overall pandemic and seasonal influenza activity remained low, except in parts of Central and South America, where there has been recent active co-circulation of pandemic and seasonal influenza H3N2 viruses. The majority of recent active transmission of pandemic influenza virus has been reported in Colombia, Costa Rica, and to a lesser extent in Cuba. <http://www.who.int/csr/don/2010_07_16/en/index.html>

Africa: In sub-Saharan Africa, the situation was largely unchanged since the last update. <http://www.who.int/csr/don/2010_07_16/en/index.html>

Asia: In Asia, overall pandemic influenza activity remained low to sporadic, except in parts of southern and western India, Malaysia, and Singapore. Substantial co-circulation of pandemic H1N1 virus and seasonal influenza H3N2 viruses was detected in Singapore throughout May and June 2010. Low levels of seasonal influenza type B viruses (and to much lesser extent pandemic influenza virus) continue to circulate across northern and southern China. <http://www.who.int/csr/don/2010_07_16/en/index.html>

United States: No further influenza surveillance reports will be published by the CDC for the 2009-2010 influenza season (last report was in week 20). The next report will be for week 40 (week ending October 9, 2010) during the 2010-2011 influenza season. <http://www.cdc.gov/flu/weekly/index.htm>

Europe: During weeks 26 and 27, low intensity was reported by 16 countries. Only four (6.9%) sentinel specimens were positive for influenza during week 26 and 27 and all of them were of type B. <http://ecdc.europa.eu/en/publications/Publications/100716_SUR_Weekly_Influenza_Surveillance_Overview.pdf>

Pandemic H1N1 Influenza Web Sites

Yukon H&SS	*www.hss.gov.yk.ca/*
PHAC:	*www.phac-aspc.gc.ca/alert-alerte/swine_200904-eng.php*
BCCDC:	*www.bccdc.ca/dis-cond/a-z/_h/HumanSwineFlu/default.htm*
BCCDC:	*www.health.gov.bc.ca/pandemic/response/index.html*
US CDC:	*www.cdc.gov/swineflu/index.htm*
WHO:	*www.who.int/csr/disease/swineflu/en/index.html*

Acronyms

ILI:	Influenza-Like Illness
pH1N1:	Pandemic H1N1 influenza or swine origin influenza
WHO:	World Health Organization

Yukon Communicable Disease Control

#4 Hospital Road Whitehorse,
Yukon Territory
Y1A 3H8
Phone: (876) 667-8323
Fax: (876) 667-8349